



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/965,613

09/27/2001

Shingo Hamaguchi

1109.65875

8145

7590

09/29/2004

Patrick G. Burns
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

NEGRON, DANIEL L

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/965,613	Applicant(s) HAMAGUCHI, SHINGO	
	Examiner Daniell L. Negrón	Art Unit 2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-15 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elly U.S. Patent No. 4,928,194 in view of Kimura et al U.S. Patent No. 6,594,110.

Regarding claim 1, Elly et al discloses a disk cartridge comprising a data storage disk (12) including a recording portion and a non-recording portion (see Fig. 1).

Elly et al further discloses a disk cartridge comprising a casing (14) including an inner space for accommodating the disk, the casing including an inner surface facing the disk (see Fig. 1), and an anti-static layer (32) provided on the inner surface of the casing (14) for eliminating static electricity generated on the disk (column 3, lines 10-14).

Elly et al further discloses a disk cartridge comprising an elastic member (19) provided on the inner surface of the casing (14) for contact with the non-recording portion (16) of the disk (see Fig. 1). Furthermore, it is considered that the hub portion (16) which is contacted by the elastic member (19) as shown by Elly et al makes up a portion of the disk structure, therefore it is considered that the elastic member (19) contacts a non-recording portion of the disk.

Elly et al however, fail to show the specifics of the elastic member wherein the elastic member assumes a non-deformed state for keeping the disk away from the anti-static layer, the

Art Unit: 2651

elastic member also assuming an elastically deformed state for allowing the disk to move into contact with the anti-static layer.

However, Kimura et al disclose a disk drive wherein an electrostatic brush (made of resilient material, column 2, lines 44-50) is able to move in and out of contact with the disk for the purpose avoiding excessive wear of the electrostatic brush during static electricity removal (column 1, line 63 through column 2, line 1-5).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the disk cartridge disclosed by Elly et al with the teachings of Kimura et al in order to protect the disk from excessive wear by using a resilient member to apply a predetermined pressing force on the disk during a static electricity discharging operation.

Regarding claim 2, Elly et al discloses a disk cartridge wherein the casing is formed with an opening (22) communicating with the inner space, the anti-static layer (32) being formed in a disk facing region on the inner surface and avoiding the opening (column 2, line 61 through column 3, line 9).

Regarding claim 5, Elly et al discloses a disk cartridge comprising a conductive member provided on an external surface of the casing (14), the conductive member being connected to the anti-static layer (column 3, lines 15-19).

3. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elly et al U.S. Patent No. 4,928,194 as modified by Kimura et al U.S. Patent No. 6,594,110 and further in view of Ogura Granted Japanese Patent Heisei No. 6-48590.

Regarding claims 3 and 4, Elly et al as modified by Kimura et al disclose a disk cartridge comprising a shutter (24, Elly et al) and a hub (16, Elly et al) provided with a magnetic member,

Art Unit: 2651

the shutter being slidable on the casing (14, Elly et al) between a close position and an open position for selectively closing the opening of the casing and furthermore the hub being attached to the center of the disk (12) (see Fig. 1, Elly et al). However, Elly et al as modified by Kimura et al fail to show the hub coming into contact with the shutter in the close position so that the disk is spaced from the anti-static layer.

Ogura however, discloses a disk cartridge and disk drive wherein the shutter is formed so as to contact the hub in the close position (see Fig. 1). The disk drive disclosed by Ogura is configured to allow the disk to contact an inner anti-static layer when the shutter is in the open position maintaining the disk spaced from the anti-static layer in the close position (page 8, 2nd paragraph).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the disk cartridge disclosed by Elly et al as modified by Kimura et al with the disk cartridge and drive as taught by Ogura in order to provide a disk drive with the capability of removing static electricity and dust from the surface of a disk and thereby providing effective recording/reproduction of data.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura Granted Japanese Patent Heisei No. 6-48590 in view of Voldman U.S. Patent No. 6,574,078.

Regarding claims 16, Ogura discloses a disk apparatus for managing data with respect to a disk cartridge including a data storage disk (2), a hub (2a) attached to the disk, a casing (3,4) for accommodating the disk (2), an anti-static layer (6) for eliminating static electricity generated on the disk (2), and an elastic member (31) provided on the casing (3,4).

Ogura also discloses a disk apparatus for managing data with respect to a disk cartridge comprising a disk drive into which the disk cartridge is inserted (see Fig. 4).

Ogura also discloses a disk apparatus for managing data with respect to a disk cartridge comprising a rotatable holder that is detachably fixed to the hub of the disk and rotated the disk (see Figs 1, 4, and page 11, 5th and 6th paragraphs).

Ogura also discloses a disk apparatus for managing data with respect to a disk cartridge comprising an actuator that causes the holder (16) and the casing (3,4) to approach and recede from each other and a controller that manages the holder and the actuator. Furthermore however not shown by Ogura, the actuator and controller are considered inherent since these components are necessary to load/unload the disk cartridge to/from the disk drive in preparation for recording, reproducing or static removal.

Ogura however fails to show a disk apparatus comprising a discharge on/off switch for selectively causing the disk to contact with the anti-static layer.

However, Voldman discloses an apparatus for removing electrostatic discharge wherein a mechanical switch is provided for the purpose of allowing the user to enable or disable (e.g. turn on/off) the discharge function of the apparatus (column 2, lines 42-51).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the disk apparatus disclosed by Ogura with the selectable electrostatic discharge switching as taught by Voldman in order to obtain a disk drive wherein electrostatic electricity protection may be activated as desired by the user further allowing for testing, evaluation, or diagnostics of the system.

Allowable Subject Matter

5. Claims 6-15 are allowed.
6. The following is an examiner's statement of reasons for allowance:

The amended claim language and the applicant's remarks in response to the Office Action mailed on March 10, 2004 (paper no. 5) distinguish the application's invention over the references that accompanied the Office Action.

Claims 6-15 teach an apparatus for managing data with respect to a disk cartridge. The distinguishing elements of the claim is a controller that manages the holder that causes the actuator and the holder to move the disk between a non-discharge position, the elastic member assuming a non-deformed state for keeping the disk away from the anti-static layer in the non-discharge portion of the disk, the elastic member also assuming an elastically deformed state for allowing the disk to move into contact with the anti-static layer in the discharge position.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

7. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 703-305-6985. The examiner can normally be reached on Monday-Friday (8:30-6:00) Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N. Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN 
September 24, 2004


SINH TRAN
PRIMARY EXAMINER